First record of the smallmouth spiny eel, *Polyacanthonotus rissoanus* for the Adriatic Sea

by

Igor ISAJLOVIĆ (1), Corrado PICCINETTI (2), Nedo VRGOČ (1) & Jakov DULČIĆ (1)

RÉSUMÉ. - Premier signalement de *Polyacanthonotus rissoanus* en mer Adriatique.

Un spécimen (TL =108 mm, W = 0.7 g) de *Polyacanthonotus rissoanus* (De Filippi & Verany, 1857) (Notacanthidae) a été capturé entre 1192 et 1200 m de profondeur dans la zone sud Adriatique (42°05.80 N; 17°38.00 E). Il s'agit du premier signalement pour l'Adriatique. Le spécimen est déposé dans la collection d'ichtyologie à l'Institute of Oceanography and Fisheries, Split, avec le numéro d'inventaire IOR-18.

Key words. - Notacanthidae - *Polyacanthonotus rissoanus* - MED - Adriatic Sea - First record.

The family Notacanthidae is represented in Mediterranean Sea by two species: *Notacanthus bonaparte* (Risso, 1840) and *Polyacanthonotus rissoanus* (De Filippi & Verany, 1857) (Carrasson and Matallanas, 2002) while four more species occur in the Atlantic: *Notacanthus chemnitzii* (Bloch, 1795), *Notacanthus sexspinis* (Richardson, 1846), *Polyacanthonotus challengeri* (Vaillant, 1888) and *Polyacanthonotus meretti* (Sulak *et al*., 1984) (Coggan *et al*., 1998).

P. rissoanus is a benthopelagic species distributed across the Mediterranean (Balearic, Catalan, Ionian and Levantine Sea) at a depth range from 500 to 2830 m (D'Onghia *et al*., 2004) where in the western part it represents one of the most abundant species below 1000 m. In the Atlantic region this species is also widely distributed from the northwestern to the northeastern and southeastern Atlantic, occupying the continental slope to depths ranging from 540 to 2875 m (Crabtree *et al*., 1985). This species could reach up to 603 mm of total length (Sulak, 1986). Gonad differentiation appears to take place at a gnathoproctal length of 40-100 mm (Coggan *et al*., 1998).

Up to date, *Polyacanthonotus rissoanus* has not been recorded in the Adriatic Sea, and with the present note this species can now be added to the Adriatic fish check list.

MATERIAL AND METHODS

During the investigation on the demersal fauna of the deepest part of the Adriatic Sea from 19 to 22 August 2008, the international expedition "Deep sea survey" under the frame work of the FAO ADRIAMED project, took place and in hauls of the entire survey one specimen of smallmouth spiny eel *P. rissoanus* (De Filippi & Verany, 1857) (family Notacanthidae) (Fig. 1) was captured at a depth between 1192 and 1200 m in the area of the southern Adriatic Pit (42°05.80 N; 17°38.00 E; Fig. 2). The examined specimen was caught using a scientific bottom trawl net GOC 73, specially designed for the MEDITS surveys, towed by research vessel "ANDREA" at the speed of 2.6 knots. Duration of each haul during expedition was 2.5 hours. In the laboratory fish were measured to the nearest 0.1 mm using caliper, weighed (nearest 0.1 g in wet mass) and dissected for sex determination. Twelve morphometric and meristic characteristics were measured (Tab. I).

Table I. - Morphometric measurements and meristic counts of the Adriatic specimen of *Polyacanthonotus rissoanus*.

	Measurements (mm) and counts
Total length	108
Gnathoproctal length	37.4
Head length	5.51
Head height	5.55
Body length	22
Eye diameter	2.26
Snout length	5.6
Post-orbital length	8.14
Fin rays	
Dorsal	XXXIII
Anal	XXXII+107
Pectoral	I+11
Pelvic	I+9

RESULTS AND DISCUSSION

The smallmouth spiny eel from the Adriatic Sea has small mouth with short pre-oral snout. Its maxilla fails to extend back to the posterior of nostril and it has light tan with black tips. Dorsal fin is extending over most of the back length. Due to small body length, no developed gonads were found neither any characteristics of sexual dimorphism described by Crabtree *et al*. (1985) were noticed.

Figure 1. - Specimen of *Polyacanthonotus rissoanus* (TL = 108 mm, W = 0.70 g) caught in the south Adriatic.

(1) Institute of Oceanography and Fisheries, Šetalište I. Meštrovića 63, Split, CROATIA. [dulcic@izor.hr]
(2) Laboratory of Marine Biology and Fisheries, Viale Adriatico 1, Fano, ITALY.

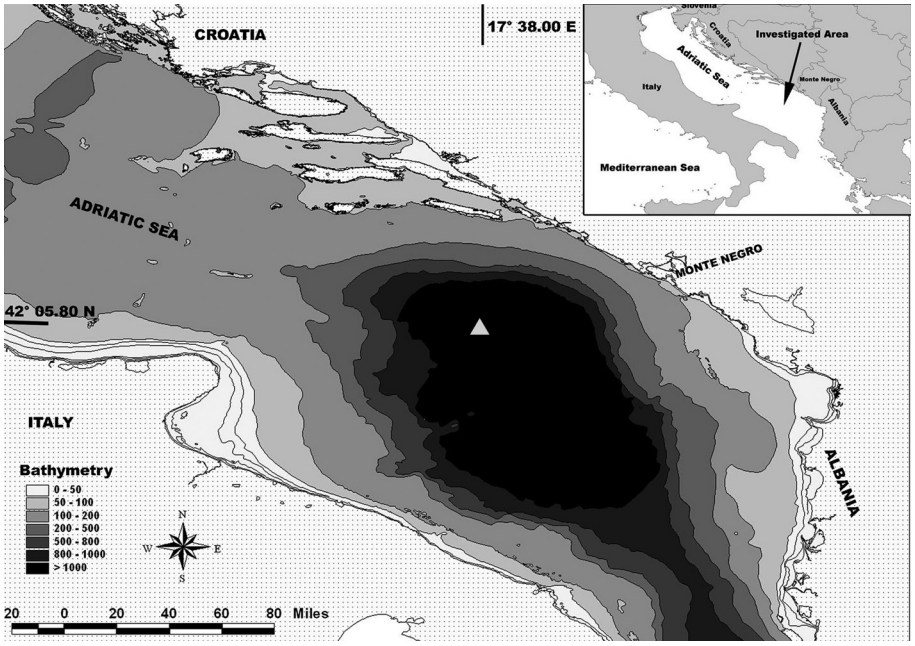

Figure 2. - New record (▲) of *Polyacanthonotus rissoanus* in the south Adriatic.

The main morphometric and meristic data are shown in table I. Values agree with description in literature (Sulak, 1986). Specimen is stored in the Ichthyological collection of the Institute of Oceanography and Fisheries, Split, under the number IOR-18.

The ichthyofauna of the Adriatic Sea has been thoroughly described thanks to the numerous scientific researches and monitoring programs held in last several decades (Vrgoč *et al.,* 2004; Dulčić *et al*., 2002; Lipej and Dulčić, 2004). Nevertheless, study of deep sea fauna of this area has not been provided systematically, therefore recent investigations conducted in the deepest part of the Adriatic resulted in findings of several species not previously noted in the southern Adriatic Sea (Ungaro *et al*., 2001; Iwamoto and Ungaro, 2002). Taking in consideration those reports, together with present record of *P. rissoanus*, it is evident that this area requires special attention in scientific investigation of Adriatic Sea in order to reveal detailed knowledge of biological and ecological aspects of deep sea ichthyofauna.

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